

Please amend the application as follows:

In the specification:

Replace the paragraph running from page 4, line 29 through page 5 line 3 with the amended paragraph below.

As is shown in Figures 2 and 3, the body of the stent **11** may comprise a plurality of main body cylindrical elements **100** formed from first circumferential segments **50** that are joined with second circumferential segments **60**. The second circumferential segments **60** of each cylindrical element **100** may be joined with second circumferential segments **60** of adjacent cylindrical elements **100** to form a plurality of first helical segments **30** and **40** in the main body **11**. (See Fig. 2). Each first circumferential segment **50** may have a circumferential dimension **55** and each second circumferential segments **60** may have a circumferential dimension ~~**66**~~ **66'** (See Fig. 3). In some embodiments, it may be desirable for the circumferential dimension **55** of the first expandable element **50** to be larger than the circumferential dimension ~~**66**~~ **66'** of the second expandable element **60**.

Replace the paragraph on page 5, lines 16-23 with the amended paragraph below.

In the embodiment shown in Figs. 1-5, the first circumferential elements **50** comprise linear portions **320** and curved portions **328** that join the linear portions **320** together to form a repeating pattern. In some, but not all, embodiments, the linear portion **320** may be parallel to the cylindrical axis

of the stent. In other embodiments, the linear portion 320 lies at an angle of between 0-45 degrees with respect to the cylindrical axis. The first circumferential segment 50 has an amplitude 350 and a period 380. In one embodiment the amplitude may range from 0.5 mm to 2.0 mm and the period may range from 0.5 mm to 2.0 mm. In some embodiments, the amplitude is less than the period. Other amplitudes and periods may be used depending on the overall stent design and performance constraints.

Replace the paragraph running from page 5, line 24 through page 6, line 13 with the amended paragraph below.

The second circumferential element 60, which may be joined together in a helical pattern to form one or more helical segments 30 or 40, may also take numerous forms, in addition to the form shown in Figure 6. In the embodiment shown in Fig 6, the second circumferential element 60 comprises linear portions 412 and curved portions 414 having a filament width 407, and resembles generally an S-shaped structure. In addition, the second element circumferential segment 60 may have an angled portion 417 attached to the linear portion 412 at an end opposite that of the curved portion 414. The angled portion may be oriented to form an angle  $\alpha$  relative to the cylindrical axis of the stent 5 in the range of 0-45 degrees. In at least one embodiment, the preferable angle  $\alpha$  is about 10 degrees. In some embodiments, the linear portions 412 of the second circumferential element 60 lies at an angle  $\Omega$  relative to the cylindrical axis of the stent, wherein  $\Omega$  preferably ranges from 0 to 45 degrees. When viewed in a planar fashion as in Fig. 2, the linear portions 412 may, in some embodiments, form an angle

$\Omega$ , relative to the cylindrical axis of the stent. In some embodiments,  $\Omega$  may be approximately equal to the helical angle of the first helical segments **30** and **40**. In one embodiment, the second circumferential elements **60** may have an amplitude **300** (see Figs. 3, 4, and 6) ranging from 0.5 mm to 2.0 mm and a period **310** ranging from 0.5 mm to 2.0 mm. Other ranges may be used depending on the particular stent size and design being employed. In one embodiment, the preferred period is about 0.82 mm and the preferred length of the linear portion **412** is about 0.5 mm and the amplitude **300** is about 0.38 mm. The amplitude of the second circumferential element **60** may be greater than, equal to, or less than the amplitude of the first circumferential element **50**. In one embodiment, the circumferential contributions of the first circumferential elements **50** to the overall circumference of the main body **11** is greater than the circumferential contribution of the second circumferential element **60**, in terms of either circumferential length or circumferential cylindrical surface area. In one embodiment, the stent may have an overall outer surface area of about 0.029 square inches.

Replace the paragraph on page 8, lines 9-18 with the amended paragraph below.

In the embodiment shown in Figs. 1, 7, 8, and 9, which is exemplary only, the linear segments **28** in the endzone **10**, are oriented at an angle  $\epsilon$  relative to the cylindrical axis of the stent. In one embodiment, the angle  $\epsilon$  is greater than 0 degrees. In another embodiment, the angle  $\epsilon$  may range from 0 to 45 degrees and in still another ~~one~~ embodiment is preferably about 10 degrees. The segments of the endzone may have a filament width

**13** of between 0.002 and 0.007 inches. In one embodiment, the repeating pattern of the endzone has a period **2** of about 0.027 inches and an amplitude **21** of about 0.043 inches. Other values may be used. As is shown in Figure 1, the struts **15**, which are but one way to attach the endzones **10** and **20** to the main body **11**, may, in one embodiment have a width of between 0.002 inches and 0.08 inches and preferably the width does not exceed the wall thickness, which typically --but not necessarily ranges from about 0.002 to 0.008 inches.

Replace the paragraph running from page 8, line 25 through page 9, line 3 with the amended paragraph below.

While endzones **10** and **20** may be used to provide square edge, not all stents according to the present invention require endzones. Figures 12-15 depict an endzoneless stent. Like the stent shown in Figures 1-9, the stent of Figures ~~12-15~~, 12-15 comprises a plurality of adjacent cylindrical elements **100**. The cylindrical elements **100** are formed from a plurality of first circumferential elements **50'** and second circumferential elements **60**. The first circumferential elements **50'** of the stent in Figures 12-15 are substantially identical to the second circumferential element **60** except that they are rotated to have a different orientation. The circumferential elements may be generally S-shaped having a linear portion **412**, a curved portion **414** having a radius **R**, and an angled portion **417**. **R** may vary widely depending on overall stent characteristics and in one embodiment varies between 0.001 and 0.02 inches and is preferably about 0.0083 inches. The angled portion **417** is spaced a distance **499** from the linear portion. In one particular embodiment, the distance **499** may vary from 0.002 to 0.020 inches and is preferably about 0.007 inches. The filament

width **407** of the elements may, in one embodiment, be about 0.13 mm. The circumferential elements depicted in Figure 14 and the expansion elements depicted in Figure 15 are positioned about the cylindrical axis 5 as defined by angle K and may be generally S-shaped having a linear portion **412**, a curved portion **414** having a radius **R**, and an angled portion **417**. The angle **K** may vary widely depending on overall stent characteristics and range of radial compression or expansion about the axis 5.